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April 22nd, 1839.

SIR WM. R. HAMILTON, A. M., President, in the Chair.

The Rev. Dr. Walsh read a paper on a Sepulchral Urn and Stone Coffin found in the Parish of Kilbride, with some notices of the Parish.

The union of Kilbride, county of Wicklow, consists of four parishes, forming a triangular area of fifteen miles in circumference, bounded by the River Ovoca, the sea coast, and a line drawn from one to the other. The Irish language is entirely extinct among the peasantry, and though the names of places and particular objects are very expressive in that language, they are altogether unintelligible to the people. Not an individual among them can speak a word of their native tongue. The majority are of the reformed religion, English colonists located in this maritime district, after the wars of Elizabeth, Cromwell, and James. They preserve many traditions of their achievements; one family kept a sword taken from the last tory seen in the county, whom they killed. It had six pounds of brass in the hilt, obtained perhaps from the copper mines of Cronebane, long before they were regularly worked. The people are serious and religious, and distinguished for their moral qualities, dishonesty is unknown among them, and their sobriety is such, that there is not a public house in the union of fifteen miles in extent, nor did Dr. Walsh remember to have ever seen in the parish a drunken man on Sunday.

The land is divided by a ridge of hills rising through the centre, dividing it into the Vale of Ovoca and the Vale of Redcross. This ridge affords many lovely prospects from its summit. One was compared by Dr. Pococke to the view he had seen of the Vale of Nazareth, from the ridges of Mount Lebanon. The sea shore is a level strand, lined with

sand hills, thrown up from the sand constantly dropped from the great submerged banks which lie along the Wicklow coast. Those near the mouth of the Ovoca are distinguished for their fertilizing property. They were found to contain immense quantities of human bones in a state of decomposition. Many battles are recorded as fought in this place, and the hills here seem tumuli raised over the bodies of the slain.

In other places the sand banks are covered with a rich sward, which seems to rest upon a soil as firm as any other land. It was suggested by a gentleman, to employ the peasantry of the neighbourhood in weaving the sedge, and other marine plants, into mats and baskets. When they were cut away for this purpose, the hills, losing the tenacity they afforded, began to move, and have continued to do so, changing the whole face of the country, covering up farms and houses, and converting the townland, like Bannow, into another Irish Herculaneum.

The ridge of the hill affords many remains of remote antiquity, some are blocks of stone fifteen feet in length, laid parallel to each other, resembling burying places made for men of gigantic stature. Beside one of these, a curious discovery was recently made. A farmer was raising stones in a wild and solitary part of the mountain, to fill up gaps ; about two feet below the surface, he turned up a flag, under which was a stone coffin, containing an urn in an inverted position, under which were two small bones laid parallel to each other. The coffin, consisting of six flags, was eighteen inches long, the sides seven inches high, and ten broad, put together with neatness, the corners rectangular, and the sides perpendicular ; the inside perfectly clean, and free from dust or mould. The urn was four inches deep, swelling in the middle, and contracting at both ends. It was rudely but neatly sculptured with great care ; the bones were very small, but perfect, having articulations at both ends, and were pronounced to be

joints of human fingers and toes. The urn was procured by Dr. Walsh, then incumbent of the parish, and was in high preservation, but when he endeavoured to move the stone coffin, it broke into fragments, which he gathered up, and had a good model of it made in wood, by a country carpenter on the spot.

Dr. Walsh concluded his communication in the following words. "The mode of sepulture by such urns and stone coffins is too common to trouble the Academy with details of them. Many are recorded in their own Transactions; but I cannot find that an urn in a stone coffin, inverted over two bones of the human fingers, has before been discovered or described. I have searched various archæological works, and can find no such thing. It only remains for me, therefore, to present to the Academy the urn and model of the coffin, &c. if they deem them worth their acceptance, and leave it to some more intelligent and industrious member to pursue the inquiry."

In a conversation which arose after the reading of this paper, the Rev. Cæsar Otway gave an account of a visit which he made, in company with the Dean of St. Patrick's, to the same district; and related some anecdotes of the opening of tumuli in other parts of Ireland. Mr. Otway suggested, that a deputation should be sent from the Academy to superintend the opening of some ancient cairns, with a view to obtain a more accurate account of their contents, than can be expected when they are opened accidentally or by peasants.

Mr. Petrie made some remarks on the historical interest of the Cairns in Ireland, most of which are noticed in the Irish annals, and strongly recommended that Mr. Otway's suggestion should be acted on.

The Secretary of Council read the following notice of a Compound of Fluorine and Carbon, by George J. Knox, Esq.; communicated in a letter to Dr. Apjohn.

“ When a current of dry chlorine gas is passed over fluoride of silver fused in a platinum tube, the extremity of which fits into a platinum receiver immersed in a freezing mixture, the fluoride of silver is decomposed, being converted into chloride of silver, and no solid or liquid substance is found in the receiver. When, however, in place of chlorine, the vapour of liquid chloride of carbon (serrulas) is substituted, the fluoride of silver is decomposed, and the receiver is found to contain acicular crystals, which are insoluble in water, acids, and alkalies, sparingly soluble in alcohol and ether, but very soluble in spirits of turpentine. When heated in a platinum crucible, they sublime unaltered, emitting a strong aromatic odour; their vapour does not affect the colour of litmus paper. When a cold glass plate is placed over the mouth of the platinum crucible, the crystals subliming condense upon the glass, and acting upon it, engrave upon its surface a beautiful outline of their form. Ignited in a closed platinum vessel, they are decomposed, depositing charcoal.

“ When the vapour of chloride of carbon is passed over iodide and bromide of silver fused in glass tubes, analogous compounds are formed; the one in the form of long needles, the other of feathery crystals. Both sublime unaltered when heated; are insoluble in water, acids, alkalies, alcohol, and ether; but soluble in warm spirits of turpentine and chloride of carbon.

“ I have failed twice in obtaining a sufficient quantity of the crystals for analysis, and so send you the paper as it is. The first time I obtained 20 grs. which would have been enough, but I lavished it in determining its qualities. I had intended analyzing it by burning it with deutoxide of copper in a leaden tube, estimating the carbonic acid by the increased weight of potash, and throwing down the fluorine

from the dissolved contents of the tube by lime. Is this method preferable to burning it with silica; conveying the fluosilicic acid into ammonia, and estimating by the weight of silica?"

The Secretary read a second notice by the same author, on a supposed fluoride of nitrogen.

"Having transferred a drop of chloride of nitrogen into a platinum capsule containing a little water, on adding to the water an aqueous solution of fluoride of silver, a gas was freely evolved, somewhat resembling chlorine in smell, but of so pungent a nature, and so exceedingly irritating to the eyes, that I was unable to approach near enough to determine any of its properties, although my eyes were protected by a mask and spectacles. When the gas had all escaped, the capsule was found to contain chloride of silver, fluoride of silver and water, and had not been sensibly heated by the intense chemical action which had taken place.

"Again, on adding to a portion of dry fluoride of silver contained in a platinum dish, a drop of chloride of nitrogen, so violent an explosion took place, that the platinum dish was torn as if it had been made of parchment, and a considerable part of it blown away."

Mr. Robert Mallet communicated a notice of the discovery of the property of the light emitted by incandescent coke to blacken photogenic paper; and proposed it as a substitute for solar light, or that from the oxy-hydrogen blowpipe with lime.

One of the most important applications of the photogenic process, as yet suggested, is its adaptation to the self registering of long continued instrumental observations. Unless, however, an artificial light, of a simple and inexpensive character, can be found to supply the place of solar light at night, the utility of this application will be much limited.

Few artificial lights emit enough of the chemical rays to

act with certainty on the prepared paper; while those which are known to act well, as the oxyhydrogen lime light, are expensive, and difficult to manage. A considerable time since, the author discovered that the light emitted by incandescent coke, at the "Twyer" (or aperture by which the blast is admitted) of a cupola or furnace for melting cast iron, contained the chemical rays in abundance; and on lately trying the effect of this light on the prepared paper, he found it was intensely blackened in about forty-five seconds. In the single experiment made, the heat, which was considerable, was not separated from the light; but the author purposed to make further experiments, in which this precaution will be attended to.

There is no difficulty to be apprehended in contriving an apparatus to burn a small quantity of coke at a high temperature. A diagram of an apparatus for this purpose was shown. It consists of a vertical tube; nine inches in diameter, lined with refractory clay, and closed at top and bottom. There is a grating about one foot from the bottom, a little above which are two opposite holes, into one of which an air blast from a revolving fanner is projected through the coke, with which the whole tube is filled. The flame passes out at the opposite hole, through a tube so contrived, as to heat the blast of air to a temperature of 500° , just before it enters the coke fire.

The light from the former lateral aperture is that proposed to be used, and issues through a plate of mica or glass opposite to it. This aperture forms part of the conductory tube for the blast, which (by passing into the coke in a direction opposite to that in which the light is emitted) keeps the illuminating surface of coke clear from ashes; these are received below the grating, and by a diversion of part of the blast, are blown into the chimney which receives the other products of the combustion.

As the vertical tube is close above, the combustion can-

not proceed upwards, while the coke with which it is filled constantly drops down to supply the place of that consumed, on the principle of the ancient furnaces, called "athanors" by the earlier chemists.

The only difficulty to be apprehended in the use of coke, is the collection of slag, from the fusion of its earthy and ferruginous constituents ; however the author does not consider that this accumulation during the period from sunset to sunrise, in mid-winter, would materially interfere with its action.

The Treasurer presented the account for the year ending March 31, 1839.

ORDERED to be entered on the minutes, and published in the Proceedings.

ORDERED,—That the Seal of the Academy be affixed to the Treasurer's Accounts.

ABSTRACT OF THE ACCOUNT OF THE ROYAL IRISH ACADEMY, FOR THE YEAR ENDING MARCH 31st, 1839.

THE CHARGE.		THE DISCHARGE.	
£ s. d.	£ s. d.	£ s. d.	£ s. d.
Balance in favour of the Academy, April 1st, 1838	227 8 3	Coals, Candles, &c.	55 19 9
Parliamentary Grant, Session 1838	300 0 0	Repairs of House, Furniture, &c.	137 7 8
Treasury warrants for Rent and Taxes	146 17 8	Rent, Taxes, and Insurance	159 18 5
Transactions sold	4 15 6	Books, Printing, and Stationary	529 16 10
Mr. Boone, London Bookseller, do.	17 4 7	Cunningham Medals	39 10 0
Hodges and Smith, two years	4 9 4	Salaries, Servants' Wages, &c.	293 4 1
One year's interest on £1500, 3½ Gov. Stock Do.	52 10 0	Contingencies	59 17 10
do. 3 per Cent. consols	45 0 0	Total Discharge	1277 14 7
One year's rent of stable	186 18 0	Balance in favour of the Academy	130 11 9
Subscriptions, Life Compositions	162 15 0		
Entrance	239 8 0		
Annual, and Arrears			
Total	£1408 6 4	Total	£1408 6 4

STATE OF THE BALANCE.

In Bank of Ireland, as per Certificate	£70 0 0
In Treasurer's hands	60 11 9
Balance as above	£130 11 9

April 22nd, 1839. Signed, THOMAS HERBERT ORPEN, Treasurer.